

REMARKS

In the non-final Office Action, the Examiner rejects claims 37-45, 49, 51-57, 63-74, and 77-89 under 35 U.S.C. § 103(a) as allegedly unpatentable over the U.S. Patent Application Publication No. 2003/0212666 to Basu (hereinafter "BASU") in view of U.S. Patent No. 6,243,713 to Nelson (hereinafter "NELSON").

Applicants respectfully traverse this rejection.

By way of the Amendment, Applicants propose amending claims 37, 39, 49, 51-57, 63-65, 80, and 85 to improve form. No new matter would be added by the entry of the present Amendment. Claims 7-45, 49, 51-57, 63-74, and 77-89 are pending.

Initial Remarks regarding Examiner's Response to Arguments

At the outset, Applicants submit the following initial remarks. Applicants submit that final Office Action, dated June 24, 2009, is improper, because the Examiner did not address the substance of Applicants' remarks. Applicants respectfully remind the Examiner that the Examiner must address all arguments which have not already been responded to in the statement of the rejection. Where Applicants traverse any rejection, the Examiner should, if he or she repeats the rejection, take note of the applicant's argument and answer the substance of it. See M.P.E.P. § 707.07(f).

For example, with respect to independent claim 37, Applicants argued that BASU and NELSON do not disclose or suggest broadening, by a processor of a computer system, one of search terms based on a plurality of user-selected operators to produce a broadened search query, where broadening the one of the search terms comprises broadening the one of the search terms

to an extent determined by a number of times the same operator is repeated, as previously recited in claim 37 (see Amendment filed February 17, 2009, pp. 18-19).

In response, the Examiner merely states that one cannot show non-obviousness by attacking references individually where the rejections are based on combinations of references, without any explanation as to what element(s) of BASU or NELSON allegedly correspond to “the same operator” or explaining which section of BASU or NELSON specifically correspond to “broadening the one of the search terms to an extent determined by a number of times the same operator is repeated” (final Office Action, pp. 16-17).

If this rejection is maintained, Applicants respectfully request that the Examiner address the substance of Applicant's arguments. For example, the Examiner should specifically explain which sections of BASU or NELSON disclose the above-noted feature of claim 37 as well as how the Examiner is construing such cited sections of the references to correspond to the above-noted feature of claim 37. Furthermore, if the Examiner is relying on a combination of BASU and NELSON, the Examiner should provide a rationale as to how the teachings of the two references are combined and how such a combination would disclose the above-noted feature of claim 37, rather than merely stating an alleged benefit of the combination.

With respect to independent claim 39, Applicants argued that BASU and NELSON do not disclose or suggest excluding, by a processor, a broadened one of the plurality of search terms from a search query, as previously recited in claim 39 (see Amendment filed February 17, 2009, pp. 20-21).

In response, the Examiner alleges that the Examiner is entitled to give claim features their broadest reasonable interpretation in light of the specification, followed by describing what is disclosed in paragraphs [0033], [0043], and [0045] of BASU, without explaining what the

Examiner's interpretation of the claim features is, or how the Examiner is construing these sections of BASU to correspond to the Examiner's interpretation.(final Office Action, p. 19). If this rejection is maintained, Applicants respectfully request that the Examiner address the substance of Applicant's arguments. For example, the Examiner should specifically how the Examiner is interpreting the above-noted feature of claim 39 and why the Examiner believes that paragraphs [0033], paragraph [0043], and paragraph [0045] of BASU correspond to this interpretation, such as what specific passage from these sections of BASU corresponds to excluding a broadened search term from a search query.

With respect to independent claim 80, the Examiner appears to take Applicants' arguments into consideration and provides a clarification of the Examiner's position (final Office Action, p. 20). While Applicants disagree with the Examiner's allegations with respect to claim 80, Applicants appreciate the Examiner's elaboration of the Examiner's position. Applicants will address the Examiner's allegations with respect to claim 80 below.

With respect to independent claim 85, Applicants pointed out that the Examiner did not address the features recited in claim 85 and further did not address Applicant's arguments that BASU and NELSON do not disclose or suggest receiving, by a network interface or by an output device of a computer system, a selection of a subset of a set of checkboxes (presented in conjunction with a set of broadened search terms) to select a subset of the broadened search terms, as previously recited in claim 85 (see Amendment filed February 17, 2009, pp. 26-27). Applicants respectfully request that the Examiner address Applicants' argument with respect to claim 85, as required by M.P.E.P. § 707.07(f).

Rejection under 35 U.S.C. § 103(a) based on BASU and NELSON

Claims 37-45, 49, 51-57, 63-74, and 77-89 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over BASU in view of NELSON. Applicants respectfully traverse this rejection.

At the outset, Applicants respectfully remind the Examiner that all words in a claim must be considered in judging the patentability of that claim against the cited references. *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). See M.P.E.P. 2143.03.

Claims 37, 38 and 40-45

Independent claim 37, amended as proposed, is directed to a method performed by a computer system. The method includes receiving, using a network interface associated with the computer system, a search query comprising a plurality of search terms from a user, where the search query further includes a plurality of user-selected operators associated with one of the search terms of the search query and where the plurality of operators comprise a same operator repeated multiple times; broadening, using one or more processors associated with the computer system, the one of the search terms based on the plurality of user-selected operators to produce a broadened search query, where broadening the one of the search terms comprises broadening the one of the search terms to an extent determined by a number of times the same operator is repeated; and executing, using one or more processors associated with the computer system, a search using the broadened search query. BASU and NELSON, whether taken alone or in any reasonable combination, do not disclose or suggest one or more of these features.

For example, BASU and NELSON do not disclose or suggest broadening, using one or more processors associated with a computer system, one of the search terms based on a plurality of user-selected operators to produce a broadened search query, where broadening the one of the

search terms comprises broadening the one of the search terms to an extent determined by a number of times a same operator is repeated, as recited in claim 37. The Examiner admits that BASU does not disclose this feature and relies on col. 7, lines 15-25 of NELSON for allegedly disclosing this feature (final Office Action, p. 3). Applicants disagree with the Examiner's interpretation of NELSON.

Col. 7, lines 15-25 of NELSON disclose:

As an optional process to increase the robustness of the multimedia retrieval pipeline, type-specific query tokens may be added 180 to any or all of the components that are in the query. Query expansion 180 selects "alternate" tokens to add to the query based on the original query tokens. For example, additional tokens may be used to represent other words similarly spelled to query keywords or that have similar meanings, or other images (or image attributes) of similar shape or color, texture, and so forth. This expansion can either be done by default, or at the discretion of the user via query operators. In addition, query expansion can add tokens of one component type in response to the presence of tokens of another type.

This section of NELSON discloses that an optional process to increase the robustness of a multimedia retrieval pipeline is to add type-specific query tokens to any or all components that are in a query. For example, additional tokens may be used to represent other words similarly spelled to query keywords, or that have similar meanings, or other images of similar shape, color, or texture. This query expansion can be done by default or at the discretion of the user via query operators. In addition, query expansion can add tokens of one component type in response to the presence of tokens of another type.

Assuming that the Examiner is relying on the tokens as allegedly corresponding to an operator, as recited in claim 37 (a point that Applicants do not concede), this section of NELSON does not disclose or suggest that one of the tokens is repeated, let alone that a broadening of one of the search terms is done to an extent determined by a number of times a token is repeated, as would be required by claim 37 based on the Examiner's interpretation of NELSON. Therefore, this section of NELSON does not disclose or suggest broadening, using one or more processors associated with a computer system, one of the search terms based on a plurality of user-selected

operators to produce a broadened search query, where broadening the one of the search terms comprises broadening the one of the search terms to an extent determined by a number of times a same operator is repeated, as recited in claim 37.

Therefore, even if BASU were to be combined with NELSON, the combination would not disclose or suggest each of the features of claim 37. Further, even if for the sake of argument, the combination of BASU and NELSON could be fairly construed to disclose or suggest each of the features of claim 37, Applicants assert that the reasons for combining BASU and NELSON do not satisfy the requirements of 35 U.S.C. § 103.

For example, with respect to the reasons for combining BASU and NELSON, the Examiner alleges (final Office Action, pp. 3-4):

It would have been obvious to an artisan of ordinary skill in the pertinent art at the time (*sic*) the invention was made to have incorporated the teaching of Nelson into the system of Basu. The modification would have been obvious because the two references are concerned with the solution to problem query broadening and data retrieval, therefore there is an implicit motivation to combine the references. In other words, the ordinary skilled artisan, during his/her quest for a solution to the cited problem, would look to the cited references at the time the invention was made. Consequently, the ordinary skilled artisan, would have been motivated to combine the cited references since Nelson's teaching would enable users of the Basu system to have different from other operator along with the ability to index results and database data.

Applicants submit that the Examiner's allegation is clearly insufficient for establishing a *prima facie* case of obviousness with respect to claim 37. The Examiner's statement is merely a conclusory statement of an alleged benefit of the combination of BASU and NELSON. Such conclusory statements have been repeatedly held to be insufficient for establishing a *prima facie* case of obviousness. In this respect, Applicants rely upon KSR International Co. v. Teleflex Inc., 550 U.S. 398, 127 S. Ct. 1727, 82 U.S.P.Q.2d 1385 (2007) (citing In re Kahn, 441 F.3d 977, 988 (Fed. Cir. 2006)), where it was held that rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with

some rational underpinning to support the legal conclusion of obviousness. In this case, no such articulated reasoning has been provided with respect to claim 37.

For example, the Supreme Court in KSR noted that the analysis supporting a rejection under 35 U.S.C. § 103 should be made explicit. See M.P.E.P. § 2143. Exemplary rationales that may support a conclusion of obviousness include: (A) Combining prior art elements according to known methods to yield predictable results; (B) Simple substitution of one known element for another to obtain predictable results; (C) Use of known technique to improve similar devices (methods, or products) in the same way; (D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results; (E) "Obvious to try" - choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success; (F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations are predictable to one of ordinary skill in the art; and (G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention.

Applicants respectfully request that the Examiner indicate which of the above-noted rationales (or another rationale) the Examiner is employing to support the alleged conclusion of obviousness with respect to claim 37. Applicants further request that the Examiner articulate the specific findings required for the Examiner's particular rationale, as enumerated in M.P.E.P. § 2143 under each of the above-noted exemplary rationales.

In the Response to Arguments section of the final Office Action, the Examiner merely states that one cannot show non-obviousness by attacking references individually where the rejections are based on combinations of references, without any explanation as to what

element(s) of BASU or NELSON allegedly correspond to “the same operator” or explaining which section of BASU or NELSON specifically correspond to “broadening the one of the search terms to an extent determined by a number of times the same operator is repeated” (final Office Action, pp. 16-17). Applicants arguments directed at the combination of BASU and NELSON are provided above. As stated above, the Examiner has not provided any rationale as to how the alleged combination of BASU and NELSON would disclose or suggest the above-noted feature of claim 37.

For at least the foregoing reasons, Applicants submit that claim 37 is patentable over BASU and NELSON, whether taken alone or in any reasonable combination. Accordingly, Applicants respectfully request that the rejection of claim 37 under 35 U.S.C. § 103(a) based on BASU and NELSON be reconsidered and withdrawn.

Claims 38 and 40-45 depend from claim 37. Therefore, these claims are patentable over BASU and NELSON, whether taken alone or in any reasonable combination, for at least the reasons set forth above with respect to claim 37. Accordingly, Applicants respectfully request that the rejection of claims 38 and 40-45 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

Claims 39 and 77-79

Independent claim 39, amended as proposed, is directed to a method performed by a computer system. The method includes receiving, using a network interface associated with the computer system, a search query comprising a plurality of search terms; broadening, using one or more processors associated with the computer system, one of the plurality of search terms; excluding, using one or more processors associated with the computer system, the broadened one of the plurality of search terms from the search query; executing, using one or more processors

associated with the computer system, a search based on the search query, after excluding the broadened one of the plurality of search terms, to provide search results; and evaluating, using one or more processors associated with the computer system, the search results relative to the excluded search term using categorical or clustered distinctions. BASU and NELSON, whether taken alone or in any reasonable combination, do not disclose or suggest one or more of these features.

For example, BASU and NELSON do not disclose or suggest excluding, using one or more processors associated with a computer system, a broadened one of a plurality of search terms from a search query, as recited in claim 39. The Examiner relies on paragraphs [0043] and [0004] of BASU for allegedly disclosing the features of claim 39 (final Office Action, p. 4). Applicants disagree with the Examiner's interpretation of BASU.

Paragraph [0043] of BASU discloses:

The query expansion operation 304 may be defined by the user or developed by the system through user interaction. It is contemplated that query to sub-query expansion may be one-to-one, one-to-many, many-to-one, or many-to-many. Referring now to FIG. 4, an example of a many-to-many query expansion process is shown. The query "outdoor" 402 is shown expanded to sub-queries "trees" 404 and "sky" 406, and the query "beach" 408 is mapped to sub-queries "sky" 406 and "sand" 410. Thus, queries may be expanded to a common sub-query while also being expanded to distinct sub-queries.

This section of BASU discloses that a query expansion operation may be defined by the user or developed by the system through user interaction. The query to sub-query expansion may be one-to-one, one-to-many, many-to-one, or many-to-many. An example of a many-to-many query is shown in Fig. 4 of BASU, which depicts the query "outdoor" mapped to the sub-queries "trees" and "sky" and the query "beach" mapped to sub-queries "sky" and "sand."

This section of BASU does not disclose or suggest excluding one of the broadened search terms from the search query. Rather, this section of BASU discloses mapping a search term to an additional search term, mapping a search term to multiple additional search terms, mapping

multiple search terms to one additional search term, and mapping multiple search terms to multiple search terms. This section of BASU does not disclose or suggest, for example, mapping a search term to an additional search term, and then excluding that search term and the additional search term from the search query, as would be required by claim 39 based on the Examiner's interpretation of BASU. Therefore, this section of BASU does not disclose or suggest excluding, using one or more processors associated with a computer system, a broadened one of a plurality of search terms from a search query, as recited in claim 39.

Paragraph [0004] of BASU discloses:

Another search strategy is the use of document classification. In this approach, documents are first classified using a document classification algorithm. Infrequent terms found in the document class are considered similar and are clustered in the same term class, referred to as a thesaurus class. The indexing of documents and queries is enhanced either by replacing a term by a thesaurus class or by adding a thesaurus class to the index data. However, the retrieval effectiveness depends strongly on some parameters that are often difficult to determine. See, for example, C. J. Crouch, B. Young, Experiments in Automatic Statistical Thesaurus Construction, SIGIR'92, 15th Int. ACM/SIGIR Conf. on R & D in Information Retrieval, Copenhagen, Denmark, pp. 77-87, June 1992. Furthermore, commercial databases typically contain millions of documents and are highly dynamic. Often the number of documents is much larger than the number of terms in the database. Consequently, document classification is much more expensive and has to be done more frequently than the simple term classification mentioned above.

This section of BASU discloses that another search strategy is the use of document classification, in which documents are classified using a classification algorithm. Infrequent terms found in a document class are considered similar and are clustered in the same term class, called a thesaurus class. This section of BASU discloses that queries are enhanced by either replacing a term by a thesaurus class or by adding a thesaurus class to the index data. Commercial databases contain millions of documents and the number of documents is much larger than the number of terms in the database. This section of BASU does not disclose or suggest broadening a search term, let alone excluding a broadened search term from a search query. Therefore, this section of BASU does not disclose or suggest excluding, using one or more processors associated with a computer

system, a broadened one of a plurality of search terms from a search query, as recited in claim 39.

NELSON does not overcome the deficiencies of BASU set forth above with respect to claim 39.

In the Response to Arguments section of the final Office Action, the Examiner alleges that paragraphs [0033], [0043], and [0045] of BASU disclose the above-noted feature of claim 39, without explaining what the Examiner's interpretation of the claim features is, or how the Examiner is construing these sections of BASU to correspond to the Examiner's interpretation. (final Office Action, pp. 18-19). Applicants respectfully request that the Examiner explain which specific passage from BASU the Examiner believes corresponds to excluding a broadened search term from a search query. Nevertheless, Applicants submit that these sections of BASU do not disclose or suggest the above-noted feature of claim 39.

Paragraph [0033] of BASU discloses:

A query may be subjective or objective. For example, the query "sunset" refers to the setting of the sun and, hence, is an abstract objective query. On the other hand, the query "beautiful evening" is termed as an abstract subjective query in so far as it is based on the user's subjective interpretations of what constitutes a beautiful evening. It is contemplated that the present invention can search both objective and subjective queries. Although subjective queries are by nature particular to the user, the query system 108 is able to learn the user's preferences through user feedback, thereby adapting the search results to the user's definition of subjective concepts.

This section of BASU discloses that a query may be subjective or objective. For example, the query "sunset" is an abstract objective query and the query "beautiful evening" is an abstract subjective query. This section of BASU discloses searching both subjective and objective queries, learning a user's preferences through user feedback, and adapting search results to the user's definition of subjective concepts. This section of BASU does not disclose or suggest broadening a search term, let alone excluding a broadened search term from a search query. Therefore, this section of BASU does not disclose or suggest excluding, using one or more

processors associated with a computer system, a broadened one of a plurality of search terms from a search query, as recited in claim 39.

Paragraph [0043] of BASU is addressed above.

Paragraph [0045] of BASU discloses:

The processing operation 306 may further translate sub-queries into one or more representations, as illustrated in FIG. 6. Thus, the processing operation 306 may include translating a context exemplar to an abstract exemplar, translating an abstract exemplar to another abstract exemplar, translating an abstract exemplar to a context exemplar, and translating a context exemplar to another context exemplar.

This section of BASU discloses translating sub-queries into one or more representations, including translating a context exemplar to an abstract exemplar, translating an abstract exemplar to another abstract exemplar, and translating a context exemplar to another context exemplar.

This section of BASU does not disclose or suggest broadening a search term, let alone excluding a broadened search term from a search query. Therefore, this section of BASU does not disclose or suggest excluding, using one or more processors associated with a computer system, a broadened one of a plurality of search terms from a search query, as recited in claim 39.

For at least the foregoing reasons, Applicants submit that claim 39 is patentable over BASU and NELSON, whether taken alone or in any reasonable combination. Accordingly, Applicants respectfully request that the rejection of claim 39 under 35 U.S.C. § 103(a) based on BASU and NELSON be reconsidered and withdrawn.

Claims 77-79 depend from claim 39. Therefore, these claims are patentable over BASU and NELSON, whether taken alone or in any reasonable combination, for at least the reasons set forth above with respect to claim 39. Accordingly, Applicants respectfully request that the rejection of claims 77-79 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

Claims 49, 51-57, and 63-64 and Claims 65-74

Independent claims 49 and 65 recite features similar to, yet possibly of different scope than, features discussed above with respect to claim 37. Therefore, these claims are patentable over BASU and NELSON, whether taken alone or in any reasonable combination, for at least the reasons set forth above with respect to claim 37. Accordingly, Applicants respectfully request that the rejection of claims 49 and 65 under 35 U.S.C. § 103(a) based on BASU and NELSON be reconsidered and withdrawn.

Claims 51-57 and 63-64 depend from claim 49. Therefore, these claims are patentable over BASU and NELSON, whether taken alone or in any reasonable combination, for at least the reasons set forth above with respect to claim 49. Accordingly, Applicants respectfully request that the rejection of claims 51-57 and 63-64 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

Claims 66-74 depend from claim 65. Therefore, these claims are patentable over BASU and NELSON, whether taken alone or in any reasonable combination, for at least the reasons set forth above with respect to claim 65. Accordingly, Applicants respectfully request that the rejection of claims 66-74 under 35 U.S.C. 103(a) be reconsidered and withdrawn.

Claims 80-84

Amended independent claim 80 is directed to a method performed by a computer system. The method includes receiving, using a network interface associated with the computer system, a search query comprising a search term; obtaining, using one or more processors associated with the computer system, a set of broadened search terms based on the search term; presenting, using a network interface associated with the computer system, the set of broadened search terms as a set of corresponding hyperlinks in a user interface; receiving, using a network interface

associated with the computer system, selection of a subset of hyperlinks of the set of hyperlinks to select a subset of the broadened search terms; broadening, using one or more processors associated with the computer system, the search query using the selected subset of broadened search terms; and executing, using one or more processors associated with the computer system, a search using the broadened search query. BASU and NELSON, whether taken alone or in any reasonable combination, do not disclose or suggest one or more of these features.

For example, BASU and NELSON do not disclose or suggest presenting, using a network interface associated with a computer system, a set of broadened search terms (obtained based on a received search term) as a set of corresponding hyperlinks in a user interface, as recited in claim 80. The Examiner appears to rely on paragraphs [0033] and [0038] of BASU for allegedly disclosing this feature (final Office Action, p. 11). Applicants disagree with the Examiner's interpretation of BASU.

Paragraph [0033] of BASU is reproduced above. This section of BASU discloses that a query may be subjective or objective. For example, the query "sunset" is an abstract objective query and the query "beautiful evening" is an abstract subjective query. This section of BASU discloses searching both subjective and objective queries, learning a user's preferences through user feedback, and adapting search results to the user's definition of subjective concepts. This section of BASU does not disclose or suggest presenting a set of broadened terms to a user, let alone presenting a set of broadened terms as a set of corresponding hyperlinks. Therefore, this section of BASU does not disclose or suggest presenting, using a network interface associated with a computer system, a set of broadened search terms (obtained based on a received search term) as a set of corresponding hyperlinks in a user interface, as recited in claim 80.

Paragraph [0038] of BASU discloses:

As mentioned above, the query system 108 of the present invention is adaptive. Specifically, the system 108 includes an adaptation module 212 that attempts to refine the search results as queries are repeated over time. The adaptation module 212 is capable of modifying the query expansion module 204, the sub-query processing module 206, and the merging module 208 according to user and system feedback. For example, if a user indicates that the sub-query term "smoke" is not relevant in a "rocket launch" query, the adaptation module 212 may adaptively assign a lower probability of relevance to the "smoke" sub-query in future iterations of "rocket launch" queries. In other words, the adaptation module 212 modifies the query expansion module 204 so that the term "smoke" is assigned a lower confidence level in a "rocket launch" query. The parametric learning techniques of the adaptation module 212 may use a generative approach, including, but not limited to, probabilistic models and graphical probabilistic models and/or a discriminant approach, including, but not limited to, kernel machines, such as support vector machines and neural networks. The adaptation process of the system 108 is discussed in greater detail below.

This section of BASU discloses an adaptation module that attempts to refine the search results as queries that are repeated over time. The adaptation module is capable of modifying a query expansion module, a sub-query processing module, and a merging module according to user and system feedback. For example, if a user indicated that the sub-query term "smoke" is not relevant to a "rocket launch" query, the adaptation module may assign a lower probability of relevance to the "smoke" sub-query for future iterations of the "rocket launch" query. The parametric learning techniques of the adaptation module may use a generative approach, including probabilistic models and discriminant approaches, such as kernel machines, support vector machines, and neural networks.

This section of BASU does not disclose or suggest presenting a set of broadened terms to a user, let alone presenting a set of broadened terms as a set of corresponding hyperlinks.

Therefore, this section of BASU does not disclose or suggest presenting, using a network interface associated with a computer system, a set of broadened search terms (obtained based on a received search term) as a set of corresponding hyperlinks in a user interface, as recited in claim 80.

NELSON does not overcome the deficiencies of BASU set forth above with respect to claim 80.

In the Response to Arguments section of the final Office Action, the Examiner alleges that any time a user is in charge or is able to make the selection to broaden a search that the user is selecting a link and that paragraph [0042] of BASU discloses presenting at least one broadened search characteristic associated with one of the search terms as a hyperlink (final Office Action, p. 20). Applicants disagree with the Examiner's allegation.

At the outset, it is simply not true that any selection to broaden a search implies selecting a link. Many methods of selection exist, such as, for example, clicking a button or typing in a command. Furthermore, selecting to broaden a search does not correspond to selecting to broaden specific terms of a search query. Claim 80 does not recite selecting a link to broaden a search. Rather, claim 80 specifically recites presenting, using a network interface associated with a computer system, a set of broadened search terms (obtained based on a received search term) as a set of corresponding hyperlinks in a user interface, receiving, using a network interface associated with the computer system, selection of a subset of hyperlinks of the set of hyperlinks to select a subset of the broadened search terms; broadening, using one or more processors associated with the computer system, the search query using the selected subset of broadened search terms. Applicants object to the Examiner's boiling down of the specifically-recited language of claim 80 to correspond to "making a selection to broaden a search."

Applicants will further address paragraph [0042] of BASU to demonstrate this section of BASU does not disclose or suggest the above-noted feature of claim 80.

Paragraph [0042] of BASU discloses:

The second level of uncertainty stems from the fact that the expanded sub-query itself cannot be represented as a deterministic entity. Thus, an expansion of the "rocket launch" query into "rocket" and "explosion" sub-queries also necessitate one or more probabilistic representations of the "rocket" and "explosion" sub-queries. The mapped sub-queries are therefore probabilistic. An example of a probabilistic sub-query could be a probability distribution, with the user selecting the particular features used to represent the sub-query. As detailed below, the present invention provides an adaptation scheme whereby

sub-query expansion is modifiable and learnable. For example, query expansion can be user-supervised such that sub-query confidence levels are evaluated based on user feedback. Alternatively, confidence levels can be system estimated from a set of examples provided to system.

This section of BASU discloses that expansion of queries into sub-queries is probabilistic, and that an example of a probabilistic sub-query could be a probability distribution, with the user selecting particular features to represent the sub-query. This section of BASU further discloses that the sub-query expansion is modifiable and learnable, and that query expansion can be user-supervised such that sub-query confidence levels are evaluated based on user feedback.

This section of BASU does not disclose or suggest presenting a set of broadened terms to a user, let alone presenting a set of broadened terms as a set of corresponding hyperlinks.

Rather, this section of BASU merely discloses that query expansion can be user-supervised. A user supervising a query expansion does not imply that the user is presented with a set of broadened search terms as a set of hyperlinks (and that the user can select specific search terms by selecting the hyperlinks). Therefore, this section of BASU does not disclose or suggest presenting, using a network interface associated with a computer system, a set of broadened search terms (obtained based on a received search term) as a set of corresponding hyperlinks in a user interface, as recited in claim 80.

For at least the foregoing reasons, Applicants submit that claim 80 is patentable over BASU and NELSON, whether taken alone or in any reasonable combination. Accordingly, Applicants respectfully request that the rejection of claim 80 under 35 U.S.C. § 103(a) based on BASU and NELSON be reconsidered and withdrawn.

Claims 81-84 depend from claim 80. Therefore, these claims are patentable over BASU and NELSON, whether taken alone or in any reasonable combination, for at least the reasons set

forth above with respect to claim 80. Accordingly, Applicants respectfully request that the rejection of claims 81-84 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

Claims 85-89

Amended independent claim 85 is directed to a method performed by a computer system. The method includes receiving, using a network interface associated with the computer system, a search query comprising a search term; obtaining, using one or more processors associated with the computer system, a set of broadened search terms based on the search term; presenting, using a network interface associated with the computer system, a set of checkboxes in conjunction with the set of broadened search terms, where each checkbox of the set of checkboxes corresponds to one broadened search term of the set of broadened search terms; receiving, using a network interface associated with the computer system, a selection of a subset of the set of checkboxes to select a subset of the broadened search terms; broadening, using one or more processors associated with the computer system, the search query using the selected subset of broadened search terms; and executing, using one or more processors associated with the computer system, a search using the broadened search query. BASU and NELSON, whether taken alone or in any reasonable combination, do not disclose or suggest one or more of these features.

For example, BASU and NELSON do not disclose or suggest receiving, using a network interface associated with a computer system, a selection of a subset of a set of checkboxes to select a subset of a set of broadened search terms and broadening, using one or more processors associated with the computer system, a search query using the selected subset of broadened search terms, as recited in claim 85. The Examiner did not address claim 85. Instead, the Examiner alleges that claims 85-89 are method claims corresponding to the methods of claims 1 and 77-79 and are rejected for the same reasons (final Office Action, p. 13). However, none of

claims 1 and 77-79 recites, for example, receiving, using a network interface associated with a computer system, a selection of a subset of a set of checkboxes to select a subset of a set of broadened search terms and broadening, using one or more processors associated with the computer system. Therefore, a *prima facie* case of obviousness with respect to claim 85 has not been established.

Nevertheless, Applicants submit that BASU and NELSON, whether taken alone or in any reasonable combination, do not disclose or suggest the above-noted feature of claim 85. For example, in rejecting claim 51, the Examiner relies on paragraph [0038] of BASU for allegedly disclosing “where the search query further includes a user-selected delimiter associated with another one of the search terms that indicates that the other one of the search terms should not be broadened” (final Office Action, pp. 6-7). Applicants submit that this section (or any other section) of BASU does not disclose or suggest the above-noted feature of claim 85.

Paragraph [0038] of BASU was reproduced above. This section of BASU discloses an adaptation module that attempts to refine the search results as queries are repeated over time. The adaptation module is capable of modifying a query expansion module, a sub-query processing module, and a merging module according to user and system feedback. For example, if a user indicated that the sub-query term “smoke” is not relevant to a “rocket launch” query, the adaptation module may assign a lower probability of relevance to the “smoke” sub-query for future iterations of the “rocket launch” query. The parametric learning techniques of the adaptation module may use a generative approach, including probabilistic models and discriminant approaches, such as kernel machines, support vector machines, and neural networks. This section of BASU does not disclose, suggest, or even mention anything that could reasonably be construed as checkboxes presented in conjunction with a set of broadened search

terms. Therefore, this section of BASU does not disclose or suggest receiving, using a network interface associated with a computer system, a selection of a subset of a set of checkboxes to select a subset of a set of broadened search terms and broadening, using one or more processors associated with the computer system, as recited in claim 85.

NELSON does not overcome the deficiencies of BASU set forth above with respect to claim 85.

In the Response to Arguments section of the final Office Action, the Examiner did not address Applicants' arguments with respect to claim 85. Applicants again respectfully request that the Examiner address all of Applicants' arguments.

For at least the foregoing reasons, Applicants submit that claim 85 is patentable over BASU and NELSON, whether taken alone or in any reasonable combination. Accordingly, Applicants respectfully request that the rejection of claim 85 under 35 U.S.C. § 103(a) based on BASU and NELSON be reconsidered and withdrawn.

Claims 86-89 depend from claim 85. Therefore, these claims are patentable over BASU and NELSON, whether taken alone or in any reasonable combination, for at least the reasons set forth above with respect to claim 85. Accordingly, Applicants respectfully request that the rejection of claims 86-89 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

Conclusion

In view of the foregoing proposed amendments and remarks, Applicants respectfully request the Examiner's reconsideration of this application, and the timely allowance of the proposed pending claims. Applicants respectfully request that the Examiner enter the amendment because the amendment does not raise new issues or require a further search of the art. Moreover, Applicants respectfully submit that the proposed amendment places the present application in condition for allowance. In addition, Applicants respectfully submit that entry of this proposed amendment would place the application in better form for appeal in the event that the application is not allowed.

While the present application is now believed to be in condition for allowance, should the Examiner find some issue to remain unresolved, or should any new issues arise which could be eliminated through discussions with Applicants' representative, then the Examiner is invited to contact the undersigned by telephone in order to expedite prosecution of this application.

As Applicants' remarks with respect to the Examiner's rejections are sufficient to overcome these rejections, Applicants' silence as to assertions by the Examiner in the Office Action or certain requirements that may be applicable to such assertions (e.g., whether a reference constitutes prior art, reasons to modify a reference and/or to combine references, assertions as to dependent claims, assertions regarding Official Notice, etc.) is not a concession by Applicants that such assertions are accurate or such requirements have been met, and Applicants reserve the right to analyze and dispute such assertions/requirements in the future.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper,

including extension of time fees, to Deposit Account No. 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,

HARRITY & HARRITY, LLP

By: /Viktor Simkovic, Reg. No. 56,012/
Viktor Simkovic
Registration No. 56,012

Date: August 24, 2009
11350 Random Hills Road
Suite 600
Fairfax, Virginia 22030
Main: (571) 432-0800
Direct: (571) 432-0899
Customer Number: 44989